

What Is Claimed Is:

1. A method to assist an operator in identifying a fault in a fluid path of a renal replacement therapy device comprising the steps of:
 - a. drawing blood from a patient into the fluid path, passing the blood through the path in the device, and returning the blood from the fluid path into the patient;
 - b. detecting a fault in the fluid path;
 - c. displaying a pictorial diagram of the fluid path on the machine graphic display, and
 - d. accentuating an element of the diagram of the fluid path where the fault has been detected.
2. A method as in claim 1 wherein the fault in the fluid path is an air bubble in the fluid path, in step (b) a location of the air bubble is detected, and in step (d) the element accentuated corresponds to the detected location of the air bubble in the fluid path.
3. A method as in claim 1 wherein the fault in the fluid path is a blood leak in the fluid path, in step (b) a location of the blood leak is detected, and in step (d) the element accentuated corresponds to the detected location of the blood leak in the fluid path.
4. A method as in claim 1 wherein the fault in the fluid path is an occlusion in the fluid path, in step (b) a location of the occlusion is detected, and in step (d) the element accentuated corresponds to the detected location of the occlusion in the fluid path.
5. A method as in claim 1 wherein the fault in the fluid path is in a filter in the fluid path, and in step (d) the element accentuated corresponds to the filter.

6. A method as in claim 1 wherein the pictorial diagram of the fluid path includes a line drawing showing the fluid path from the patient through the device and back to the patient, and the accentuated element is a section of the line drawing of the fluid path corresponding to a location in the fluid path where the fault is located.

7. A method as in claim 1 further comprising displaying a text message regarding the fault adjacent the pictorial diagram.

8. A method as in claim 1 further comprising displaying a text message of a procedure to cure the fault and said text message is displayed adjacent the pictorial diagram.

9. A method as in claim 1 wherein the pictorial diagram includes a first view of the fluid path and a second view of the fluid path, and further comprising selecting the first view or second view to be displayed in step (c) depending on the detected fault.

10. A method as in claim 1 wherein the pictorial diagram includes a front view of the fluid path and a side view of the fluid path, and further comprising selecting the front view or side view to be displayed in step (c) depending on the detected fault.

11. A method as in claim 1 further comprising monitoring sensors coupled to the device to detect the fault in the fluid path.

12. A method as in claim 1 further comprising sensing a pressure in the fluid path and detecting a fault in the fluid path if the sensed pressure varies from a predetermined level of pressure.

13. A method as in claim 1 further comprising optically sensing the blood through the path to detect bubble faults in the fluid path.

14. A method as in claim 1 further comprising the step of displaying a pictorial diagram of a pump adjacent the diagram of the fluid path, and rotating the diagram of the pump while blood flows through the fluid path.

15. A method as in claim 1 wherein the fluid path includes a filtrate path extending from a blood filter and accentuating the filtrate path of the pictorial diagram when a fault is detected in the filtrate path.

16. A graphical user interface for a device for treatment of blood comprising:

a controller for the device generating a pictogram to be displayed;

the pictogram on the display shows alternatively a side view and a front view of the device depending on the location of an element of the fluid path that requires user attention.

17. A graphical user interface as in claim 16 wherein the pictogram flashes in alternating colors designating a location of a bloodline where the leakage of blood was detected by analysis of pressure.

18. A graphical user interface as in claim 16 wherein the pictogram flashes in alternating colors at a location of a bloodline where an occlusion of blood path is detected.

19. A graphical user interface as in claim 16 wherein the pictogram flashes in alternating colors a location of a bloodline where leakage of blood is detected.

20. A graphical user interface as in claim 16 wherein the pictogram flashes in alternating colors a location of a bloodline where a leakage of blood is detected by analysis by the controller of pressure between the patient blood withdrawal catheter and blood filter.

21. A graphical user interface as in claim 16 wherein the pictogram flashes in alternating colors a location of the bloodline where a leakage of blood was detected by analysis by the controller of pressure between a patient blood withdrawal catheter and a blood filter.

22. A graphical user interface as in claim 16 wherein the pictogram flashes in alternating colors to designate a location of a bloodline where an occlusion of a blood path is analyzed by the controller of pressure between a patient blood withdrawal catheter and a blood filter.

23. A graphical user interface as in claim 16 wherein the pictogram flashes in alternating color a location of the bloodline where an occlusion of bloodline is detected by analysis by the controller of pressure between a blood filter and a patient blood withdrawal catheter.

24. A graphical user interface as in claim 16 wherein the pictogram flashes a symbol of a blood roller pump when a pump jam is detected by the controller analyzing electric current through a pump motor of the device.

25. A graphical user interface as in claim 16 wherein the pictogram flashes a symbol of a blood roller pump if occlusion of the blood filter is detected by the controller analyzing electric current through a pump motor of the device.

26. A graphical user interface as in claim 16 wherein the device is an ultrafiltration device.

27. A method for detecting a connection of an external sensor to a device having a controller electrically connected to a sensor coupling, said method comprising:

- a. applying a voltage potential to a pull-up resistor electrically in the device and connected to the sensor coupling;

- b. determining that the sensor is connected to the device if the applied voltage drops below a predetermined level, and
- c. determining that the sensor is not connected if the applied voltage level remains above the predetermined level.